كلية الحاسب الآلي ونظم المعلومات
College of Computer and Information Systems

جامعة أم القرى
UMM AL-QURA UNIVERSITY

Project 2: Hospital System

Student's:
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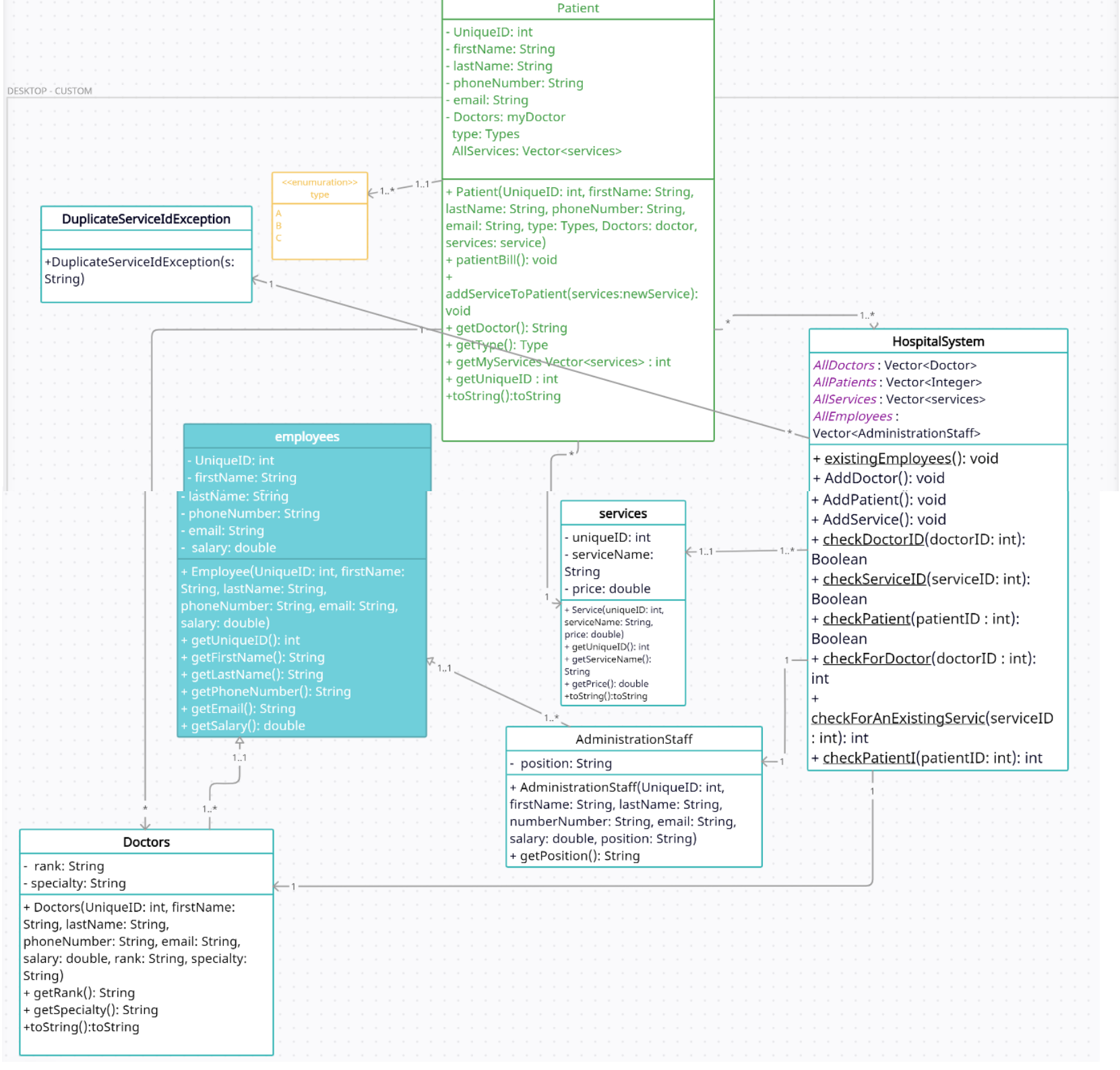
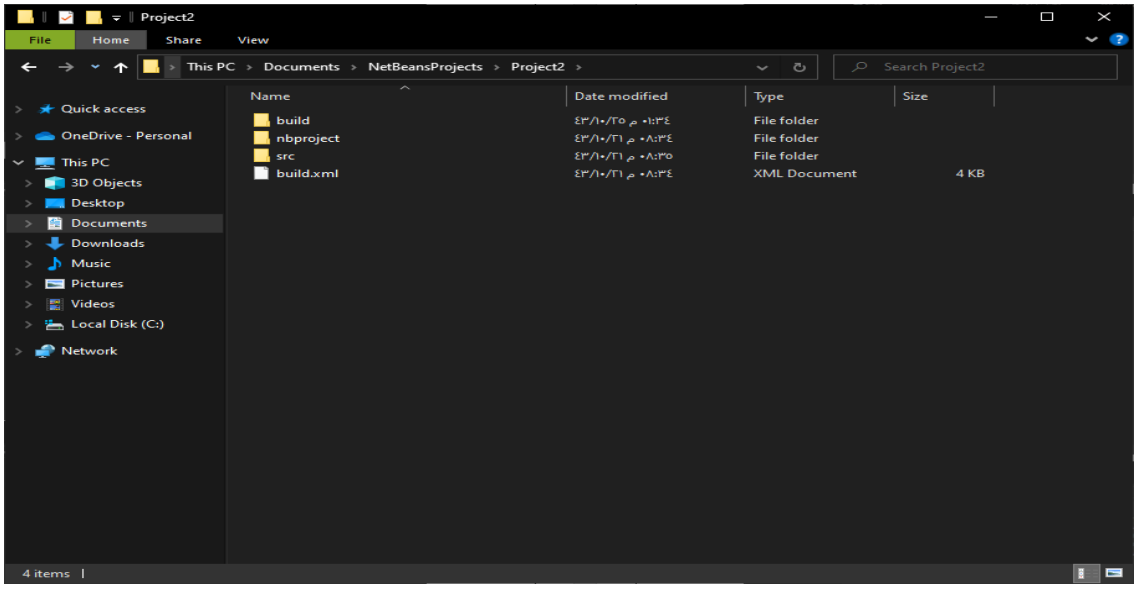
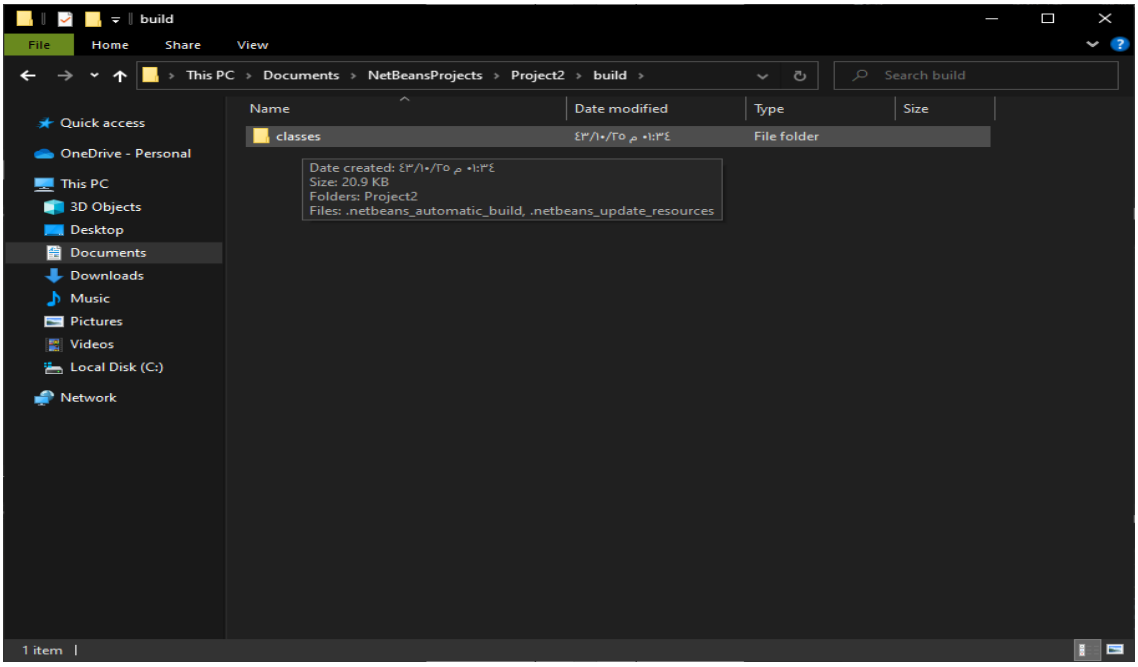
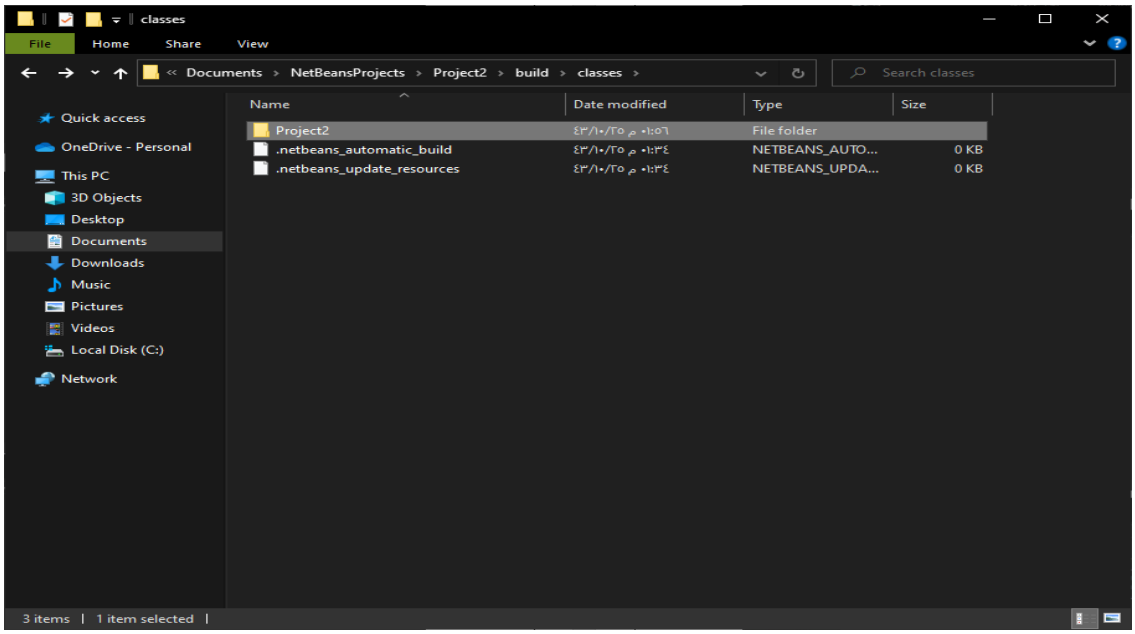
Subject's Instructor:
Dr. Mohamed Ahmed

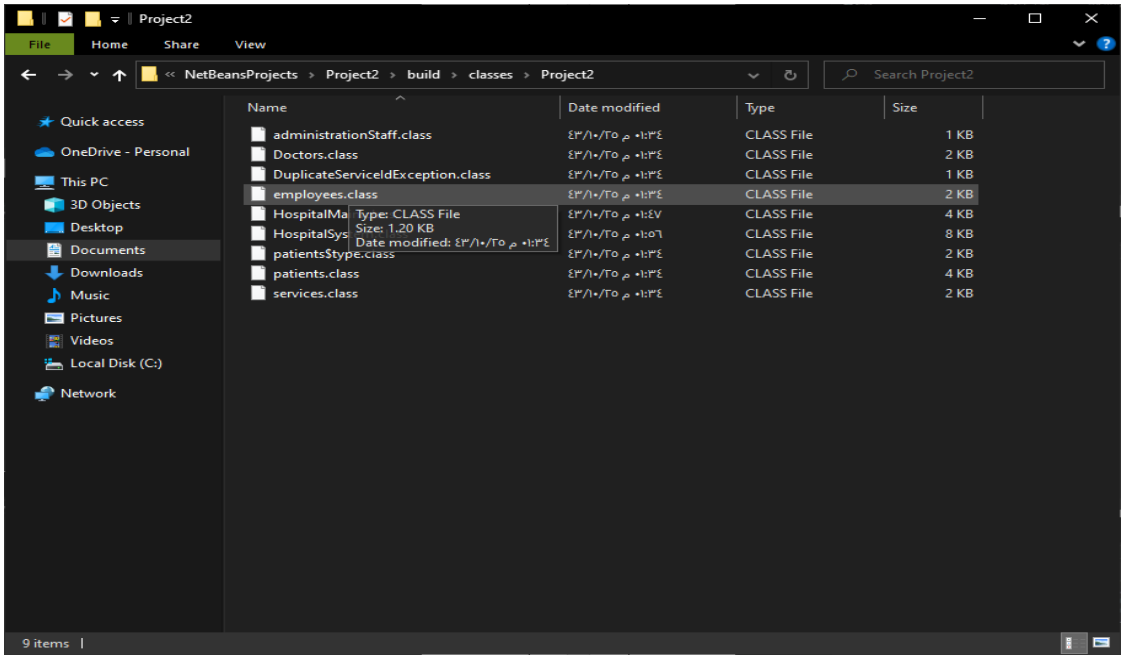

DESKTOP - CUSTOM
Patient
- UniqueID: int
- firstName: String
- lastName: String
- phoneNumber: String
- email: String
- Doctors: myDoctor
type: Types
AllServices: Vector<services>
+ Patient(UniqueID: int, firstName: String, lastName: String, phoneNumber: String, email: String, type: Types, Doctors: doctor, services: service)
+ patientBill(): void
+ addServiceToPatient(services:newService): void
+ getDoctor(): String
+ getType(): Type
+ getMyServices Vector<services> : int
+ getUniqueID : int
+toString():toString
<<enumuration>>
type
A
B
C
DuplicateServiceIdException
+DuplicateServiceIdException(s: String)
HospitalSystem
AllDoctors : Vector<Doctor>
AllPatients : Vector<Integer>
AllServices : Vector<services>
AllEmployees : Vector<AdministrationStaff>
+ existingEmployees(): void
+ AddDoctor(): void
+ AddPatient(): void
+ AddService(): void
+ checkDoctorID(doctorID: int): Boolean
+ checkServiceID(serviceID: int): Boolean
+ checkPatient(patientID : int): Boolean
+ checkForDoctor(doctorID : int): int
+ checkForAnExistingServic(serviceID : int): int
+ checkPatientI(patientID: int): int
employees
- UniqueID: int
- firstName: String
- lastName: String
- phoneNumber: String
- email: String
- salary: double
+ Employee(UniqueID: int, firstName: String, lastName: String, phoneNumber: String, email: String, salary: double)
+ getUniqueID(): int
+ getFirstName(): String
+ getLastName(): String
+ getPhoneNumber(): String
+ getEmail(): String
+ getSalary(): double
services
- uniqueID: int
- serviceName: String
- price: double
+ Service(uniqueID: int, serviceName: String, price: double)
+ getUniqueID(): int
+ getServiceName(): String
+ getPrice(): double
+toString():toString
AdministrationStaff
- position: String
+ AdministrationStaff(UniqueID: int, firstName: String, lastName: String, numberNumber: String, email: String, salary: double, position: String)
+ getPosition(): String
Doctors
- rank: String
- specialty: String
+ Doctors(UniqueID: int, firstName: String, lastName: String, phoneNumber: String, email: String, salary: double, rank: String, specialty: String)
+ getRank(): String
+ getSpecialty(): String
+toString():toString

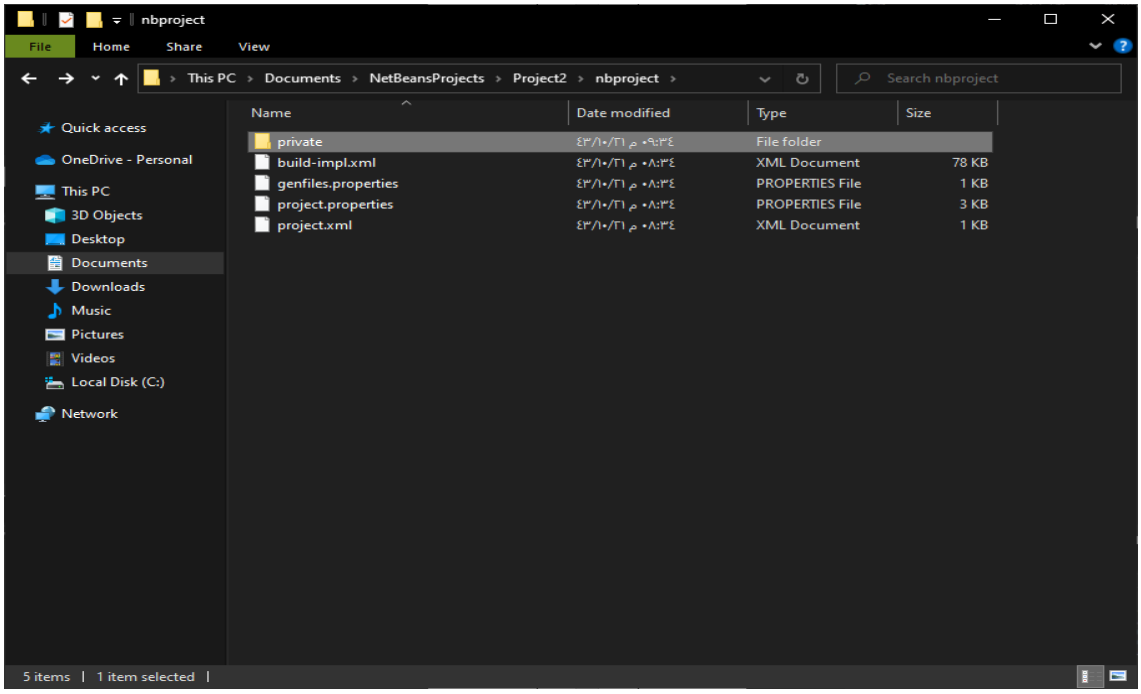
Screenshots from the folder structure

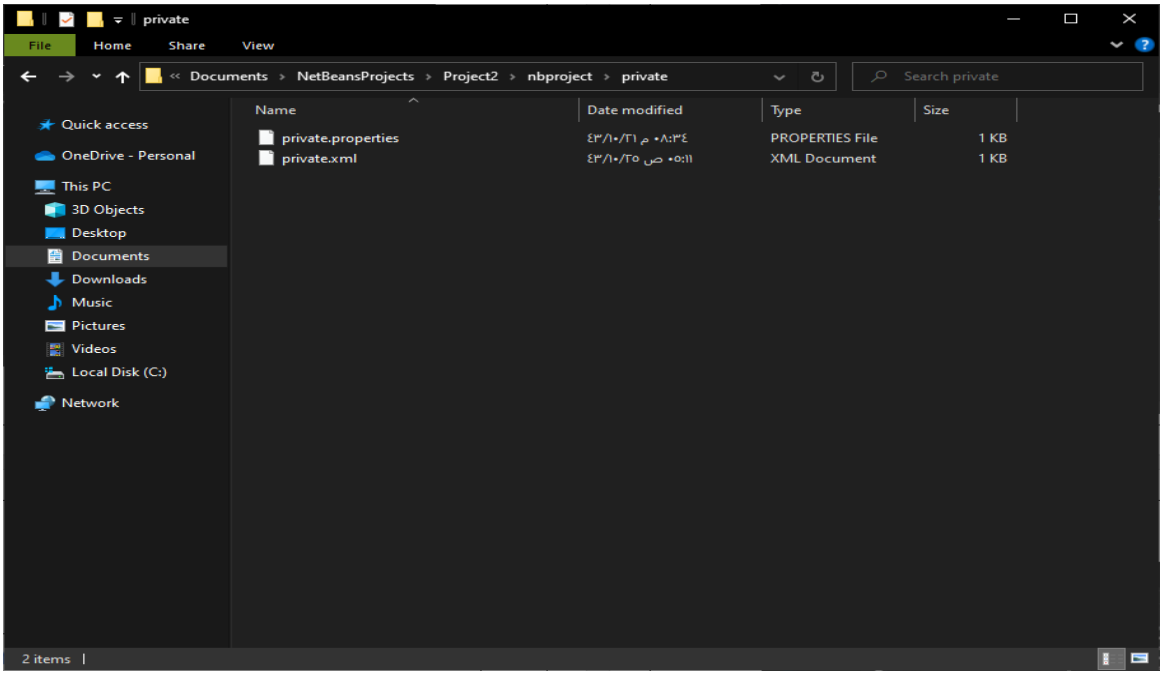


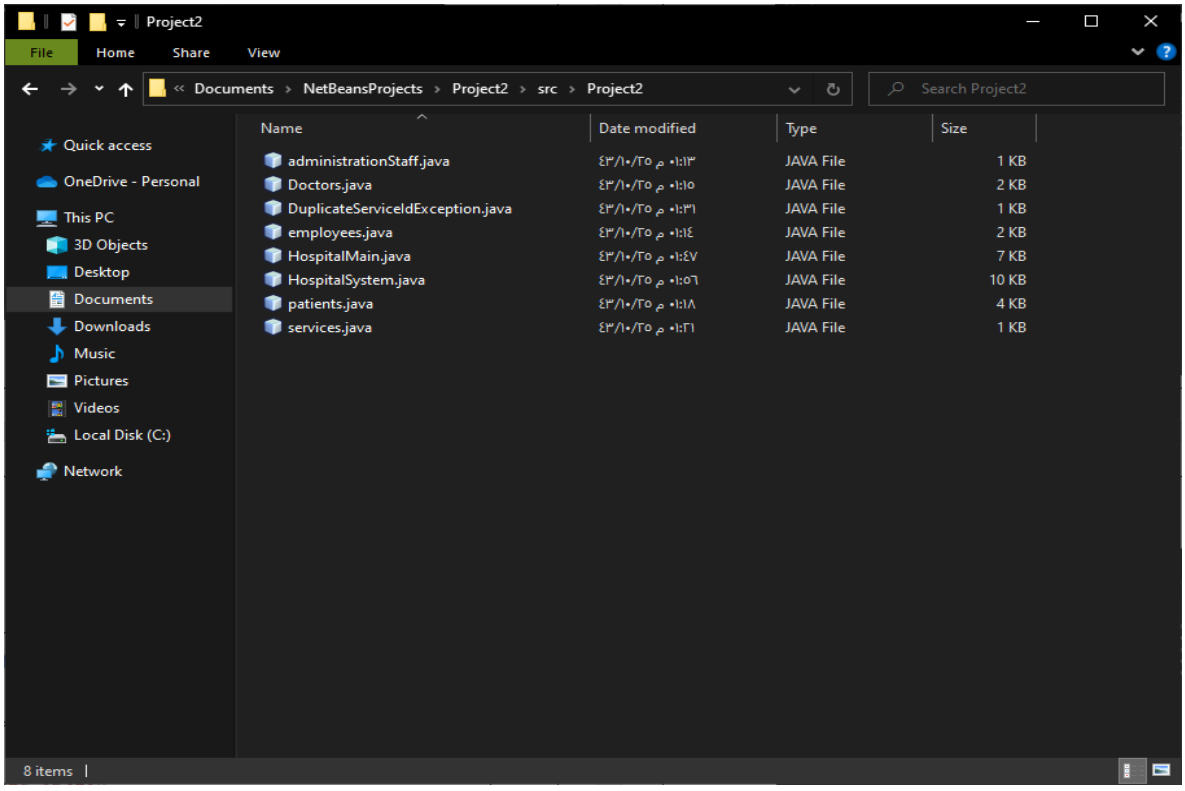





Project2
File
Home
Share
View
NetBeansProjects › Project2 › build › classes › Project2
Search Project2
Quick access
OneDrive - Personal
This PC
3D Objects
Desktop
Documents
Downloads
Music
Pictures
Videos
Local Disk (C:)
Network
Name
Date modified
Type
Size
administrationStaff.class
Doctors.class
DuplicateServiceIdException.class
employees.class
HospitalMa
HospitalSys
patients$type.class
patients.class
services.class
CLASS File
1 KB
2 KB
4 KB
8 KB
Type: CLASS File
Size: 1.20 KB
9 items


nbproject
File
Home
Share
View
This PC › Documents › NetBeansProjects › Project2 › nbproject ›
Search nbproject
Quick access
OneDrive - Personal
This PC
3D Objects
Desktop
Documents
Downloads
Music
Pictures
Videos
Local Disk (C:)
Network
Name
Date modified
Type
Size
private
File folder
build-impl.xml
XML Document
78 KB
genfiles.properties
PROPERTIES File
1 KB
project.properties
PROPERTIES File
3 KB
project.xml
XML Document
1 KB
5 items | 1 item selected


private
File
Home
Share
View
Documents › NetBeansProjects › Project2 › nbproject › private
Search private
Quick access
OneDrive - Personal
This PC
3D Objects
Desktop
Documents
Downloads
Music
Pictures
Videos
Local Disk (C:)
Network
Name
Date modified
Type
Size
private.properties
PROPERTIES File
1 KB
private.xml
XML Document
1 KB
2 items



All the possible outputs

When the user enter an existing last name

```
run:
************************************************************
*           Welcome to Our  Hospital System                *
*     Student #1: Ammar Hussain Ahmed, 441017869           *
*     Student #2: Ammar Ibrahim FalLatah, 442014605        *
************************************************************
Enter your last name (to use the system) :
ahmed
Welcome!
```

When the user enter a last name that does not exist

```
run:
************************************************************
*           Welcome to Our  Hospital System                *
*     Student #1: Ammar Hussain Ahmed, 441017869           *
*     Student #2: Ammar Ibrahim FalLatah, 442014605        *
************************************************************
Enter your last name (to use the system) :
ali
Enter your last name (to use the system) :
Error : Wrong Name!! , Please Try Again
```

Main menu and list of options the user can choose from

```
run:
************************************************************
*           Welcome to Our  Hospital System                *
*    Student #1: Ammar Hussain Ahmed, 441017869            *
*    Student #2: Ammar Ibrahim FalLatah, 442014605         *
************************************************************
Enter your last name (to use the system) :
ahmed
Welcome!

Please Enter a number of your choice (enter 9 to exit)
-------------------------------------------------------
1. Add a doctor
2. Add a service
3. Add a patient
4. Print all doctors information
5. Print all patients information
6. Display specific doctor data
7. Display specific patient data
8. Print a specific patients bill
9. Exit the program
```

1- Adding a new doctor

```
Please a choose a choice from 1 to 9: 1
Enter Doctors ID: 122
Enter Doctors First Name: Ali
Enter Doctors Last Name: Omar
Enter Doctors Phone Number: 05877772
Enter Doctors Email: Omar@gmail.com
Enter Doctors Salary: 3000
Enter Doctors Rank: 6
Enter Doctors Specialty: Pharmacist
Success : new Doctor's added Successfully.

Please Enter a number of your choice (enter 9 to exit)
-------------------------------------------------------
1. Add a doctor
2. Add a service
3. Add a patient
4. Print all doctors information
5. Print all patients information
6. Display specific doctor data
7. Display specific patient data
8. Print a specific patients bill
9. Exit the program

Please a choose a choice from 1 to 9:
```

When the user enter an id of an existing doctor

```
Please a choose a choice from 1 to 9: 1
Enter Doctors ID: 13
Error : Duplicated unique ID !!
```

2- Adding a new service

```
Please a choose a choice from 1 to 9: 2
Enter Services ID:
224
Enter Services name:
Checking
Enter Services Price:
80
Success: you added a new service successfully

Please Enter a number of your choice (enter 9 to exit)
--------------------------------------------------------
1. Add a doctor
2. Add a service
3. Add a patient
4. Print all doctors information
5. Print all patients information
6. Display specific doctor data
7. Display specific patient data
8. Print a specific patients bill
9. Exit the program

Please a choose a choice from 1 to 9:
```

When the user attempts to add a new service with an existing service id (DuplicateServiceIdException will be thrown)

```
Please a choose a choice from 1 to 9: 2
Enter Services ID:
123
Exception in thread "main" Project2.DuplicateServiceIdException: Invalid service ID. This service ID is already utilized
        at Project2.HospitalSystem.AddService(HospitalSystem.java:158)
        at Project2.HospitalMain.main(HospitalMain.java:34)
Java Result: 1
```

3- Adding a new patient

```
Please a choose a choice from 1 to 9: 3
Enter your Unique ID:
2
Enter your first name :
ammar
Enter your last name :
ali
Choose your type's number :
1-A
2-B
3-C
1
Enter your phone number :
053587979
Enter your email address :
afd@email.com
Enter your doctor's unique ID :
11
Enter the unique ID for the service that you want to get
1
1- Add another service
2- Finish
2
Success : Patient's Account Is Created Successfully.

Please Enter a number of your choice (enter 9 to exit)
```

When the user enter an id service of a service that he already has

```
Enter your doctor's unique ID :
11
Enter the unique ID for the service that you want to get
111
1- Add another service
2- Finish
1
Enter the unique ID for the service that you want to get :
111
Success : Patient's Account Is Created Successfully.
1- Add another service
2- Finish
Error : You already have this service
```

When the user enter an id service that does not exist

```
Enter the unique ID for the service that you want to get
12
Error : This Service is not found !!
```

When the user enter a doctor id that does not exist

```
Enter your phone number :
05698789
Enter your email address :
amir@gmail.com
Enter your doctor's unique ID :
15
Error : This doctor is not found !!
```

When the user enter an invalid number

```
--
Enter the unique ID for the service that you want to get
12
1- Add another service
2- Finish
3
Error : Wrong Option !!
```

When the user enter an id of an existing patient

```
Please a choose a choice from 1 to 9: 3
Enter your Unique ID:
123
Error : Duplicated unique ID !!
```

4- Printing all doctors information

```
Please a choose a choice from 1 to 9: 4
Doctor Mohammed adnan information :
Full name : Mohammed adnan
Unique ID : 11
Phone Number : 057855
Email Address : moha@gmail.com
Rank : specialist        Specialty : Medical laboratory
Salary : 50000.0 SAR
--------------------------------------------------------------------------
Doctor Mohammed Ahmed information :
Full name : Mohammed Ahmed
Unique ID : 12
Phone Number : 057855
Email Address : moha@gmail.com
Rank : Technician        Specialty : dentist
Salary : 25000.0 SAR
--------------------------------------------------------------------------
Doctor Ali Omar information :
Full name : Ali Omar
Unique ID : 122
Phone Number : 05877772
Email Address : Omar@gmail.com
Rank : 6         Specialty : Pharmacist
Salary : 3000.0 SAR
--------------------------------------------------------------------------
Success : Doctors Information Is Displayed Successfully

Please Enter a number of your choice (enter 9 to exit)
-------------------------------------------------------
1. Add a doctor
2. Add a service
3. Add a patient
4. Print all doctors information
5. Print all patients information
6. Display specific doctor data
7. Display specific patient data
8. Print a specific patients bill
9. Exit the program

Please a choose a choice from 1 to 9:
```

5- Printing all patients information

```
Please a choose a choice from 1 to 9: 5
Patient ammar fall's Information :
Full Name : ammar fall
Unique ID : 123
Phone Number : 05678231
Email Address : ammar@gmail.com
Type : A
Patient's Doctor : Mohammed adnan        Rank : specialist      Speciality : Medical laboratory
Patient's Services : 1- checking
-----------------------------------------------------------------------------------------------
Patient ali faris's Information :
Full Name : ali faris
Unique ID : 321
Phone Number : 055612
Email Address : ali@gmail.com
Type : B
Patient's Doctor : Mohammed Ahmed        Rank : Technician      Speciality : dentist
Patient's Services : 1- checking        2- x-ray
-----------------------------------------------------------------------------------------------
Success : Patients Information Is Displayed Successfully

Please Enter a number of your choice (enter 9 to exit)
-------------------------------------------------------
1. Add a doctor
2. Add a service
3. Add a patient
4. Print all doctors information
5. Print all patients information
6. Display specific doctor data
7. Display specific patient data
8. Print a specific patients bill
9. Exit the program
```

6- Displaying a specific doctor data

```
Please a choose a choice from 1 to 9: 6
Enter doctor's unique ID
11
Doctor Mohammed adnan information :
Full name : Mohammed adnan
Unique ID : 11
Phone Number : 057855
Email Address : moha@gmail.com
Rank : specialist       Specialty : Medical laboratory
Salary : 50000.0 SAR
-----------------------------------------------------------------
Success : Doctor's Information Is Displayed Successfully

Please Enter a number of your choice (enter 9 to exit)
-------------------------------------------------------
1. Add a doctor
2. Add a service
3. Add a patient
4. Print all doctors information
5. Print all patients information
6. Display specific doctor data
7. Display specific patient data
8. Print a specific patients bill
9. Exit the program

Please a choose a choice from 1 to 9:
```

When the user enter a doctor's id that does not exist

```
Please a choose a choice from 1 to 9: 6
Enter doctor's unique ID
23

Please Enter a number of your choice (enter 9 to exit)
-------------------------------------------------------
1. Add a doctor
2. Add a service
3. Add a patient
4. Print all doctors information
5. Print all patients information
6. Display specific doctor data
7. Display specific patient data
8. Print a specific patients bill
9. Exit the program

Error : Doctor is not found !!
Please a choose a choice from 1 to 9:
```

7- Displaying a specific patient data

```
Please a choose a choice from 1 to 9: 7
Enter patient's unique ID
12
Patient ammar fall's Information :
Full Name : ammar fall
Unique ID : 12
Phone Number : 0568923
Email Address : ammar@gmail.com
Type : A
Patient's Doctor : Mohammed adnan        Rank : specialist      Speciality : Medical laboratory
Patient's Services : 1- checking
-------------------------------------------------------------------------------------------------
Success : Patient's Information Is Displayed Successfully

Please Enter a number of your choice (enter 9 to exit)
-----------------------------------------------------
1. Add a doctor
2. Add a service
3. Add a patient
4. Print all doctors information
5. Print all patients information
6. Display specific doctor data
7. Display specific patient data
8. Print a specific patients bill
9. Exit the program


Please a choose a choice from 1 to 9:
```

8- Printing a specific patients bill

```
Please a choose a choice from 1 to 9: 8
Enter patient's unique ID
321
Your Bill Details :
Service Name : checking Service ID : 111        Service Price : $80.0
Service Name : x-ray    Service ID : 112        Service Price : $170.0
You are from type : B
Total Price : $ 250.0
Success : Patient's Bill Is Displayed Successfully

Please Enter a number of your choice (enter 9 to exit)
-----------------------------------------------------
1. Add a doctor
2. Add a service
3. Add a patient
4. Print all doctors information
5. Print all patients information
6. Display specific doctor data
7. Display specific patient data
8. Print a specific patients bill
9. Exit the program

Please a choose a choice from 1 to 9:
```

8- Printing a specific patients bill of type A

```
Please a choose a choice from 1 to 9: 8
Enter patient's unique ID
123
Your Bill Details :
Service Name : physical therapy Service ID : 1  Service Price : $320.0
Service Name : x-ray    Service ID : 2  Service Price : $170.0
Since you are from type A, you have a 40% discount
Total Price : $ 294.0
Success : Patient's Bill Is Displayed Successfully

Please Enter a number of your choice (enter 9 to exit)
---------------------------------------------------------
1. Add a doctor
2. Add a service
3. Add a patient
4. Print all doctors information
5. Print all patients information
6. Display specific doctor data
7. Display specific patient data
8. Print a specific patients bill
9. Exit the program

Please a choose a choice from 1 to 9:
```

When the user enter a patients id that does not exist

```
Please a choose a choice from 1 to 9: 8
Enter patient's unique ID
3211
Error : Patient is not found !!

Please Enter a number of your choice (enter 9 to exit)
---------------------------------------------------------
1. Add a doctor
2. Add a service
3. Add a patient
4. Print all doctors information
5. Print all patients information
6. Display specific doctor data
7. Display specific patient data
8. Print a specific patients bill
9. Exit the program

Please a choose a choice from 1 to 9:
```